

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- Claim 1 (Currently Amended)
- Claim 2 (Currently Amended)
- Claim 3 (Previously Amended)
- Claim 4 (Previously Amended)
- Claim 5 (Previously Amended)
- Claim 6 (Previously Amended)
- Claim 7 (Previously Amended)
- Claim 8 (Original)
- Claim 9 (Currently Amended)
- Claim 10 (Currently Amended)
- Claim 11 (Previously Amended)
- Claim 12 (Previously Amended)
- Claim 13 (Currently Amended)
- Claim 14 (Currently Amended)
- Claim 15 (Currently Amended)
- Claim 16 (Currently Amended)
- Claim 17 (New)
- Claim 18 (New)
- Claim 19 (New)
- Claim 20 (New)

CLAIMS:

1. (Currently Amended)

A self-enhancing search system for providing expanded keyword searches comprising:

a semantic taxonomy containing semantic nodes in a hierarchical structure;

a search system text analyzer that periodically looks through documents for a database and identifies semantic node terms in the semantic taxonomy applicable to keyword terms used in the documents;

a semantic binder for attaching to a set of the documents [[to]] a semantic node term applicable to keyword terms used in the set of the documents and related by the semantic node term; and

a relevant document finder which automatically enhances a users keyword query entry with [[a]] the semantic node term applicable to a keyword query term in the users keyword query to create an enhanced keyword query and based on the enhanced keyword query, including both the users keyword query term and the semantic node term, ~~that~~ not only locates documents in the set of documents that contain a match for the users keyword query term but also locates documents of the set which do not contain a match for the keyword query term in the users keyword query but contain other keyword search terms of the set of documents that ~~belong to~~ are linked by the semantic node applicable to [[a]] the users keyword ~~search~~ keyword query term.

2. (Currently Amended)

The search system of claim 1, wherein the enhanced search query automatically includes both “the users keyword search query term” OR “the semantic node term” in an expanded keyword query to automatically without user intervention locate additional documents that contain a match for either the users keyword search query or another keyword query containing the semantic node term which additional documents contain at least one different keyword term related to the semantic node.

3. (Previously Amended)

The search system of claim 2 including a semantic dictionary which defines user keyword query terms in user queries in accordance with the semantic nodes in the semantic dictionary.

4. (Previously Amended)

The search system of claim 3 including a semantic dictionary builder which systematically examines the system log off line for new keyword queries to increase the keyword terms in the semantic dictionary and associate them with one or more semantic nodes.

5. (Previously Amended)

The search system of claim 4 including ranking the results of searches using the enhanced queries to place terms in the semantic dictionary in order of most often used keyword query terms to reduce table lookup time.

6. (Previously Amended)

The search system of claim 5, wherein the semantic dictionary builder includes:

a sub-module that identifies domain specific terms in a given keyword query, using domain specific glossary;

a sub-module that finds synonyms and related terms for the identified keyword query terms, using domain specific thesaurus;

a sub-module that finds other statistically close terms to the identified keyword query terms; and

a sub-module that identifies relevant domain specific categories for the identified keyword terms, using domain specific ontology.

7. (Previously Amended)

The search system of claim 6, wherein the dictionary builder includes:

a sub-module that binds keyword queries in the identified semantic taxonomy categories, using the results of the text analyzer.

8. (Original)

The search system of claim 7, wherein the semantic binder includes:

a sub-module that adds new doc-query links to the meta-data of the corresponding textual index entries to link the documents to the semantic taxonomy categories.

9. (Currently Amended)

Self-enhancing search program on a computer usable medium comprising:
semantic taxonomy code containing semantic nodes in a hierarchical structure;

search system text analyzer code that periodically looks through documents for a database and identifies semantic node terms in the semantic taxonomy applicable to keyword terms used in the document;

semantic binder code attaching a subset of the documents for the database to a semantic node term applicable to various keyword terms used in the subset of document documents;

query enhancer code which automatically adds [[a]] the semantic node term to a user keyword query containing a keyword search term applicable to the semantic node term; and

relevant document finder code which based on enhanced queries including the semantic node term locates documents which do not contain the keyword search term query but contain at least one other keyword term ~~that is~~ of the various search terms that are related to the keyword search term by the semantic node term applicable to ~~a user's~~ users search.

10. (Currently Amended)

The search program of claim 9, wherein the enhanced search query automatically includes a search containing “the users keyword search query term” OR “the semantic node term” to automatically locate documents without user intervention containing either the keyword search query term or the one of the

other various keyword term terms linked semantically related to the users keyword term through the semantic node.

11. (Previously Amended)

The search program of claim 10 including code for a semantic dictionary which defines user keyword query terms in user keyword queries in accordance with the semantic nodes in the semantic dictionary.

12. (Previously Amended)

The search system program of claim 11 including code for a semantic dictionary builder which off line regularly examines new user keyword queries in the system log to increase the keyword terms in the semantic dictionary and associates them with one or more semantic nodes.

13. (Currently Amended)

The search system program of claim 12 including code for ranking the results of searches using the enhanced queries to place keyword query terms in order of most used keyword terms to reduce table lookup time.

14. (Currently Amended)

The search system program of claim 13, wherein the semantic binder includes:

code for a sub-module that identifies domain specific keyword terms in a given query, using domain specific glossary;

code for a sub-module that finds synonyms and related terms for the identified keyword terms, using domain specific thesaurus;

code for a sub-module that finds other statistically close keyword terms; and
code for a sub-module that identifies relevant domain specific categories for the identified keyword terms, using domain specific ontology.

15. (Currently Amended)

The search system program of claim 14, wherein the dictionary builder includes code for a sub-module that binds keyword queries in the identified semantic taxonomy categories, using the original results of the semantic binder.

16. (Currently Amended)

The search system program of claim 15, wherein a semantic binder including the module comprises:

[[A]] code for a sub-module that adds new doc-query links to the meta-data of the textual index entries to link the documents to the semantic taxonomy categories.

17. (New)

A method for a computer search system to interrogate a database that automatically provides expanded keyword search queries comprising:

providing a semantic taxonomy containing semantic nodes in a hierarchical structure;

providing a search system text analyzer that periodically looks through documents for a database and identifies semantic node terms in the semantic taxonomy applicable to keyword terms used in the documents;

using a semantic binder for attaching to a semantic node term to database textual indexes of a set of documents which semantic node term is applicable to

different keyword terms used in the set of documents related by the semantic node term; and

a relevant document finder which automatically enhances a users keyword query entry with the semantic node term applicable to the users keyword query to automatically create an enhanced keyword query including both the users keyword query term and the semantic node term that not only locates documents of the set that contain a match for the users keyword query containing the users keyword query term but also locates documents of the set which do not contain a match for the users keyword query with the users keyword query term but which contain other different keyword search terms of the set of documents that are linked to the semantic node term in the users keyword query containing the users keyword search.

18. (New)

The method of claim 17 including the step of having the enhanced keyword search query to automatically include both “the users keyword search query term” OR “the semantic node term” that without user intervention automatically locates documents that contain a match for either the users keyword search query or documents containing a link to the semantic node term through their textual indexes.

19. (New)

The method of claim 2 including the step of using a semantic dictionary which defines user keyword query terms in user queries in accordance with the semantic nodes in the semantic dictionary.

20 (New)

The search system of claim 19, including the step of using a semantic dictionary builder which systematically examines the system log off line for new keyword queries to increase the keyword terms in the semantic dictionary and associate them with one or more semantic nodes.